We claim:

1. A descriptive record of a particular biological condition in a first population of cells based on a first sample of cells having the biological condition, comprising:

a set of numerical gene expression values for a selected panel of gene loci constituents selected from either the private or public experimental record or both to be informative about the particular biological condition, each value in the set corresponding to a unique gene locus constituent in the panel of gene loci constituents, the set of values forming a first profile data set for the population of cells having the particular biological condition,

wherein the gene expression value for each constituent is obtained under measurement conditions that are reproducible within 20 percent.

2. A descriptive record of a particular biological according to claim 1, wherein the gene expression value for each constituent is obtained under measurement conditions that are reproducible within 10 percent.

3. A descriptive record of a particular biological condition in a first population of cells based on a first sample of cells having the biological condition, comprising:

a set of numerical gene expression values for a selected panel of gene loci constituents selected from either the private or public experimental record or both to be informative about the particular biological condition, each value in the set corresponding to a unique gene locus constituent in the panel of gene loci constituents, the set of values forming a first profile data set for the population of cells having the particular biological condition,

wherein the gene expression value for each constituent is obtained under measurement conditions that are reproducible such that the coefficient of variation for each value is less than approximately 3 percent.

4. A descriptive record according to claim 3, wherein the measurement conditions that are reproducible include intra-assay variability and inter-assay variability.

5. A description record according to claim 4, wherein intra-assay variability is reproducible such that the average coefficient of variation for measurements for each assay is less than 1 percent.

6. A description record according to claim 4, wherein inter-assay variability is reproducible such that the average coefficient of variation for measurements for each value is less than 2 percent.

7. A descriptive record according to claim 3, wherein the selected panel contains up to 100 constituents.

8. A descriptive record according to claim 3, wherein the selected panel contains 3 to 100 genes.

9. A descriptive record according to claim 3, wherein the selected panel contains 100 to 500 genes.

10. A descriptive record according to claim 3, wherein the selected panel contains 3 genes.

11. A descriptive record according to claim 3, wherein the selected panel contains 4 genes.

12. A descriptive record according to claim 3, wherein the selected panel contains 6 genes.

13. A descriptive record according to claim 3, wherein the selected panel contains 12 genes.

14. A descriptive record according to claim 3, wherein the sample of cells is from blood and the selected panel contains gene loci constituents associated with tissue or body fluid other than blood.

15. A descriptive record according to claim 3, wherein the selected panel is a signature panel.

16. A descriptive record according to claim 3, wherein the sample is obtained under a first circumstance selected from the group consisting of time at which sample is obtained, site from which sample is obtained, and biological condition of the population of cells.

17. A descriptive record according to claim 16, wherein the first profile data set is a baseline profile data set.

18. A descriptive record according to claim 3, wherein the numerical gene expression values are concentration measurements of proteins.

19. A descriptive record according to claim 3, wherein the numerical gene expression values are concentration measurements of mRNA.

20. A descriptive record of a particular biological condition in a first population of cells according to claim 3, further comprising:

a second population of cells, based on a second sample of cells having a second particular biological condition;

a set of numerical gene expression values for the selected panel of gene loci constituents forming a second profile data set for the second population of cells having the second biological condition, the second set of values optionally being an average for multiple gene expression values from multiple populations of cells for each locus in the panel; and

a third set of numbers corresponding to a function of the first set of values and the second set of values with respect to each gene locus in the panel, the third set

being a calibrated profile data set; the first profile data set and the calibrated profile data set being descriptive of the first biological condition with respect to the second biological condition.

21. A descriptive record according to claim 20, wherein the first population of cells and the second population of cells are the same population of cells.

22. A descriptive record according to claim 20, wherein the first population of cells and the second population of cells are different populations of cells.

23. A descriptive record according to claim 20, wherein the first and second populations of cells are obtained from a subject and represent an indicator population of cells.

24. A gene expression profile data set according to claim 20, wherein the first and second populations of cells are in a subject or derived from a subject.

25. A descriptive record according to any of claims 20 through 24, wherein the function to which the third set of numbers corresponds is a ratio of the first set of values and the second set of values with respect to each gene locus in the panel.

26. A descriptive record according to any of claims 20 through 24, wherein the second set of values forming a second profile data set is an average of a second set of values contained in a library of profile data sets for the second biological condition; the library containing a plurality of profile data sets grouped according to a predetermined biological condition, the first profile data set and the calibrated profile data set being descriptive of a susceptibility for the first biological condition with respect to the second biological condition.

27. A method of diagnosing a susceptibility for a first biological condition with respect to a second biological condition in a subject, comprising:

creating a descriptive record according to claim 26;

comparing the first profile data set and the calibrated profile data set;

observing any change in the first profile data set with respect to the calibrated profile data set to diagnose a susceptibility for the first biological condition with respect to the second biological condition in the subject.

28. A library of descriptive records according to claim 25, wherein each of a plurality of first sets of numerical gene expression values forming a plurality of first profile data sets is determined at pre-selected time intervals with respect to each of a plurality of second sets of numerical gene expression values forming a plurality of second profile data sets, the ratios of each of the plurality of first and second sets of values with respect to each gene locus in the panel being a plurality of calibrated profile data sets, the plurality of first profile data sets and the plurality of calibrated profile data sets being a library of descriptive records that is descriptive of the first biological condition with respect to the second biological condition.

29. A library of descriptive records according to claim 28, wherein the library of descriptive records is further descriptive of the change of the first biological condition with respect to the second biological condition.

30. A method of monitoring the change of a first biological condition with respect to a second biological condition over time, comprising:

creating a library of descriptive records according to claim 29;

comparing the plurality of first profile data sets determined at pre-selected time intervals and the plurality of calibrated profile data sets;

observing any change over time in the plurality of first profile data sets with respect to the plurality of calibrated profile data sets to monitor the change of the first biological condition with respect to the second biological condition over time.

31. A library of descriptive records according to claim 29, wherein the library of descriptive records is a library of signature profiles descriptive of the first biological condition with respect to the second biological condition.

32. A descriptive record according to any of claims 20 through 24 based on a selected

population of cells that have been subjected to an agent to induce the first biological condition wherein a standardized profile data set for the second biological condition is used, the first profile data set and the calibrated profile data set being descriptive of the capacity of the agent to induce the first biological condition with respect to the second biological condition.

33. A method for establishing a descriptive record for an agent to induce a first biological condition, comprising:

creating a descriptive record according to claim 28;

comparing the first profile data set and calibrated profile data set;

observing any change in the first profile data set with respect to the calibrated data set to establish the descriptive record for the agent to induce the first biological condition.

34. A descriptive record according to claim 32, wherein the agent is a nutraceutical.

35. A method for establishing a descriptive record for an agent to induce a first biological condition according to claim 33, wherein the agent is a nutraceutical.

36. A descriptive record according to claim 32, wherein the agent is a pharmaceutical.

37. A method for establishing a descriptive record for an agent to induce a first biological condition according to claim 33, wherein the agent is a pharmaceutical.

38. A descriptive record according to claim 32, wherein the agent is an infectious agent.

39. A method for establishing a descriptive record for an agent to induce a first biological condition according to claim 33, wherein the agent is an infectious agent.

40. A descriptive record according to claim 32, wherein the agent is a complex mixture.

41. A method for establishing a descriptive record for an agent to induce a first biological condition according to claim 33, wherein the agent is a complex mixture.

42. A method for establishing a descriptive record for an agent to induce a first biological condition according to claim 33, wherein the agent is a complex mixture and the induced biological condition results from any of a synergistic, additive, negative, neutral or toxic activity interaction between the first and second compounds.

43. A descriptive record according to claim 32, wherein a change in the first biological condition with respect to the second biological condition is descriptive of a biological activity of the agent.

44. A method for using the descriptive record of claim 43 to establish a biological activity of the agent.

45. A descriptive record according to claim 32, wherein a change in the first biological condition with respect to the second biological condition is descriptive of a mechanism of action for the agent.

46. A method for using the descriptive record of claim 45 to determine a mechanism of action for the agent.

47. A descriptive record according to claim 32, wherein a change in the first biological condition with respect to the second biological condition is descriptive of a mechanism for metabolism of the agent.

48. A method for using the descriptive record of claim 47 to determine a mechanism for metabolism of the agent.

49. A descriptive record according to claim 32, wherein the agent further comprises a first compound and a second compound and the induced biological condition results from

any of synergism, interference or neutral interaction between the first and second compounds.

50. A method for establishing a descriptive record according to claim 33, wherein the agent further comprises a first compound and a second compound and the induced biological condition results from any of a synergistic, additive, negative, neutral or toxic activity interaction between the first and second compounds.

51. A descriptive record according to claim 32, wherein the agent further comprises a plurality of compounds such that the induced biological condition results from any of synergism, interference or neutral interaction between the plurality of compounds.

52. A method for establishing a descriptive record according to claim 33, wherein the agent further comprises a plurality of compounds such that the induced biological condition results from any of synergism, interference or neutral interaction between the plurality of compounds.

53. A descriptive record according to claim 32, wherein the induced biological condition is a toxic effect on the subject.

54. A method for establishing a descriptive record according to claim 33, wherein the induced biological condition is a toxic effect on the subject.

55. A descriptive record according to claim 32, wherein the induced biological condition is a therapeutic effect on the subject.

56. A descriptive record according to claim 20, wherein the first biological condition is a consequence of the effects of any of an infectious agent, a biological warfare agent or an environmental agent and the second biological condition is a reversal of these adverse effects.

57. A method for establishing a descriptive record according to claim 33, wherein the

first biological condition is a consequence of the effects of any of an infectious agent, a biological warfare agent or an environmental agent and the second biological condition is a reversal of these adverse effects.

58. A descriptive record according to claim 28, wherein the library of descriptive records comprises a medical history for a single subject or single condition.

59. A method for using the descriptive record of claim 58 to compile a medical history for a single subject.

60. A method for using the descriptive record of claim 58 to compile a medical history for a single condition.

61. A library of descriptive records according to claim 28, wherein the library of descriptive records comprises medical information about a plurality of subjects or biological conditions.

62. A method for using the library of descriptive records of claim 61 to compile medical information about a plurality of subjects.

63. A method for using the library of descriptive records of claim 61 to compile medical information about a plurality of biological conditions.

64. A library of descriptive records according to claim 31, wherein the library of signature profile data sets consists of signature profile data sets from a plurality of subjects.

65. A method of using the library of descriptive records of claim 64 to compile medical information about a plurality of subjects.

66. A method of using the library of descriptive records of claim 64 to compile medical information about a plurality of biological conditions.